DOCUMENT RESUME

ED 157 511 IR 006 017

AUTHOR Massialas, Byron G.
TITLE Coping in the 1980's: Inquiry Skills and Participation in Decision-Making for Fifth and Sixth Graders.
INSTITUTION Agency for Instructional Television, Bloomington, Ind.
SPONS AGENCY EXXON Corp., New York, N.Y.
PUB DATE 76
NOTE 20p.; The Essential Learning Skills Television Project. Background Paper; For related documents, see IR 006 016, IR 006 019, and IR 006 021

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Curriculum Design; Daily Living Skills; *Decision Making Skills; Educational Planning; Educational Television; *Futures (of Society); Grade 5; Grade 6; *Humanistic Education; *Intermediate Grades; *Relevance (Education); School Environment; *Student Participation

ABSTRACT

To meet the condition of society that Toffler calls "overchoice," schools must redirect their role and provide a program that enables children and youth to develop and sharpen their decision-making skills--cognitive, evaluative, participatory, normative, and affective. All these skills can be developed and refined in the natural settings within the school, e.g., the classroom, the cafeteria, the principal's office, extracurricular activities, the school bus. Educators can utilize these settings to involve students in real-life experiences and to encourage student participation in decisions that will affect them. The task for the schools, then, is to plan systematically for decision-making experiences, and to accept the participatory work of students as legitimate school experience, meriting the same rewards as those given in traditional academic programs. (Author/VT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED157511

Television Project

IR006017

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Background Paper

Coping in the 1980's: Inquiry Skills and Participation in Decision-Making for Fifth and Sixth Graders

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Saul Rockman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

by
Byron G. Massialas
Professor of Education
Florida State University

The Essential Learning Skills Television Project is a cooperative activity of state and provincial agencies, designed to strengthen learning skills instruction in American and Canadian elementary schools. The project had its origin in a 1973-74 series of meetings of educators and educational broadcasters in the United States and Canada. Organized and managed by the Agency for Instructional Television, it is funded largely by the participating states and provinces.

Specifically, the project undertakes to develop television and related printed materials that will enhance the teaching of communication skills (listening, speaking, reading, writing), mathematics skills (computation, measurement), and critical thinking and study skills (inquiry, reference, analysis, organization).

This is one in a series of background papers prepared to assist in the conceptualization of materials for the fifth and sixth grades. These materials are to emphasize the critical thinking and study skills and include review of the communication and mathematics skills.

This document was developed for The Essential Learning Skills Television Project. However, its content does not necessarily reflect the position or policy of the project.

© 1976 Agency for Instructional Television

Coping in the 1980's: Inquiry Skills and Participation in Decision-Making for Fifth and Sixth Graders

Abstract

This paper operates on the assumption that society in the 1980's and the 1990's will provide more and more alternatives for individual choice. Individuals should be equipped with appropriate skills for making reflective choices and for acting upon these choices with determination. Without these skills, individuals will find it very difficult to obtain happiness, satisfaction, and self-fulfillment.

To meet the condition of society that Toffler calls "overchoice," schools must redirect their role and provide a program that enables children and youth to develop and sharpen their decision-making skills—cognitive, evaluative, participatory, normative, and affective. All these skills can be developed and refined in the natural settings within the school—the classroom, the cafeteria, the principal's office, the "extracurricular" activities, the school bus, etc. Educators can utilize these settings to involve students in real-life experiences and to encourage student participation in decisions that affect them. The task for the schools, then, is to plan systematically (not to leave it to chance) for decision-making experiences, and to accept the participatory work of students as legitimate school experience, meriting the same rewards as those given in traditional academic programs.

Introduction

The pedagogy presented in this paper is based on the assumption that the American and the world society increasingly will be faced with a condition that Alvin Toffler calls "overchoice." This is simply a condition in which individuals have such a vast number of alternatives to choose from that they are virtually paralyzed by the complexity of the task. To meet this condition of overchoice, Toffler argues, individuals need coping skills, i.e., skills that will enable them to evaluate reflectively their world and select alternatives for action that would bring individual happiness, satisfaction, and self-fulfillment. In this context the aim of schooling in the 1980's and 1990's is to provide conditions for the individual to develop a sense of control of his or her environment, a sense of control that is largely the result of knowledge, understanding, and participatory activity.

In the new pedagogy, not only is "learning how to learn" stressed, but action-learning becomes a key element of the education of the young. Toffler (1974) asks that action-learning become a dominant mode of instruction, not only for the old but for the young. He asks for actual participation in decisions on the part of students and for a school setting that "creates opportunities for students to move from the field back to the classroom . . . for probing exploration of the personal and public values that underlie their successes and failures. . . . The combination of action-learning with academic

work, and both of these with a future orientation . . . helps close the gap between change occurring 'out there' and change occurring within the individual, so that learners no longer regard the world as divorced from themselves, and themselves as immune to (and perhaps incapable of) change" (Toffler, 1974, p. 18).

Research (Hess & Torney, 1967) indicates that the most crucial period in the socialization of a person is that between the ages of three and thirteen. During this period individuals form their basic orientations toward their environments and develop the necessary skills to cope with this environment. The ages between ten and thirteen are particularly crucial because children are reaching adolescence, and they need to enter it with the requisite attitudes and skills. It is extremely important not to teach children of *this age* inquiry and problem-solving skills in the abstract but to provide settings in which these skills are practiced. These settings should open up the opportunity to participate in and make decisions about matters that concern the children and the persons with whom they interact.

Instructional Goals

How will the school help children understand their environment and acquire the skills necessary to cope effectively with their world?[1] What are the instructional goals that the school should strive to accomplish? We believe the school should provide instructional programs that enable the children:

1. To understand the key issues in their world—political, social, economic, and ecological;
2. To relate macro issues to micro concerns—to connect, for example, national or world problems to individual or school problems and thus acquire "multilevel understanding" of these issues;
3. To participate directly in decisions affecting them;
4. To apply ethical norms to decision-making—both to the substance of the decision and the procedures used in making it;
5. To develop a sense of efficacy and internal control.

To accomplish these goals we propose that the entire school become a laboratory that provides the settings for the understanding of issues and participation in decision-making. The school-as-lab approach is based on the idea that the school—the classroom, the gym, the cafeteria, the "front office"—provide natural situations that can be used, with some planning, to involve students directly in problem-solving and decision-making. The application of this ap-

[1]We assume at this point that the school is only one of the socialization agents—others being the family, the peer group, the church, and other community agencies, etc. We assume that for the most part these agents would operate in harmony with each other. To ensure maximum harmony the school would have to take the initiative in keeping in close touch with these agents—apprising them of the school's work, involving them in its projects, offering its services and expertise, etc.

proach to the daily activities of students in school makes learning *meaningful* and *relevant* to the real problems confronting the students.

Specific Skills Needed The matrix presented here (page 5) is an attempt to provide a comprehensive map of all the skills and behaviors that potentially can be learned in school.[2] The two-dimensional matrix or table of specifications brings together in an organized manner the content of instruction as well as the student behaviors sought. Each cell in the matrix represents the intersection of substantive ideas (drawn from the learned disciplines of knowledge or from actual learner experiences)[3] and skills, attitudes, and behaviors of learners. For our purposes we assume that the substantive dimension can be reduced to four broad categories—political, social, economic, and bioecological. In our example we are using the political as the basis for the substantive dimension of the matrix. In the same example the behavioral dimension is subdivided into cognitive, evaluative, participatory, normative, and affective categories. A brief explanation of each category and subcategory is given below.

Cognitive *Cognitive skills* are those that enable individuals to understand how the system of which they are a part operates. The process is basically that of generating and testing hypotheses. All problem-solving behaviors that are goal oriented are part of what we call the cognitive domain. This has been the area that has been stressed a great deal since the Woods Hole Conference in 1959, which in many ways revolutionized curriculum and instruction for the 1960's and the 1970's.[4] While it is expected that the emphasis on the cognitive skills will persist in the 1980's, there are new areas that will be equally emphasized (participatory and normative) and will be discussed later.

At the risk of being repetitious we will present what we consider to be the behavioral definitions of the cognitive skills, beginning with "Making Distinctions" (A) and ending with "Applying a Generalization" (K). There is nothing new about these skills. Virtually all educators who write about problem-solving, from Dewey to Bruner to Toffler, etc., use basically the same skills, notwithstanding the terminology describing them. What is new is the effort to translate the definitions into observable behaviors. The behavioral defini-

---

[2]This matrix is referred to as a "table of specifications" to be used by teachers to identify desirable instructional objectives and means for attaining them. For details see: Bloom, Hastings, & Madaus (1971), and Massialas, Sprague, & Hurst (1975).

[3]It should be noted that unlike the "structuralist" school of thought in curriculum development as advanced by Joseph Schwab, Philip Phenix, and others, we accept experience as expressed by learners as providing another bona fide source of substantive content in curriculum construction.

[4]While there are variations among children in the ten-to-twelve age group, there is consensus among educational researchers that, by and large, children of this age can function at all levels of cognitive performance as indicated in the matrix.

tions presented here are drawn from Massialas, Sprague, & Hurst (1975, pp. 146-148).

A. *Making Distinctions*
Making distinctions refers to the students' being able to differentiate between dissimilar objects, ideas, values, and behaviors. For example, the student can examine three types of behavior and identify two which are similar to each other and one which is not related to the other two behaviors. Or more simply, making distinctions involves identifying simple similarities and differences.

B. *Demonstrating Conceptual Understanding*
Conceptual understanding can be demonstrated at three levels: (1) the identification of examples and non-examples of concept groups, (2) the identification of attributes, functions, or processes of a given system or concept from a list of examples and non-examples, and (3) the classification of individual ideas, objects, actions, values, beliefs, into a group based on similar characteristics defined explicitly. In grouping or classifying objects, students are going beyond a simple definition of a word by showing they can identify similar characteristics of a concept. In showing conceptual understanding, students must also be able to identify examples that do not belong to a specific group (non-examples). Thus, students are to go beyond the simple observation of differing phenomena. They are able to place observed phenomena into conceptual categories that they can define in their own words and to create their own original examples.

C. *Identifying a Problem*
A problem is usually defined as a situation in which there is a conflict between or a discrepancy in data or knowledge about a given topic the learner is experiencing. Because problems most often concern knowledge processes, information, and beliefs about what is true, no obvious answer to the discrepancy exists. In studying a problem, some questions arise as to what is meant, what is true, what might happen next, what can be done to terminate the discrepancy, or all of these. Problems can be personal, local, national, or international in scope.

D. *Stating a Problem*
This operation differs slightly from identifying a problem. Students are given greater flexibility in interpreting the data presented. When students are asked to state a problem, they are given a few guidelines to direct their thinking, yet the question is open-ended. Student responses should follow logically from the information.

E. *Forming a Hypothesis*
A hypothesis is a declarative general statement of explanation or solution or both that states a relationship between two or more factors or events. Hypotheses are usually posed in such a way that, if they are true, they will provide a solution to the problem. Hypotheses are also general in that they do not relate to one instance or one time, but are stated in the present tense and in-

Decision-Making in the School: Substance and Process

The Political Domain																																
Substantive-Procedural-Experiential																																
LEVELS OF PARTICIPATION 1 — Individual 2 — Class 3 — School 4 — Out of school																																

clude more than one case. One example of a hypothesis from social science will demonstrate this point:

> **If people are kept from obtaining important goals, then they will become frustrated and demonstrate withdrawal, aggression, rationalization, or other frustration-related behaviors.**

In forming a hypothesis, students are presented with data and a question asking them to explain a relationship. The statement (hypothesis) should be in the students' own words and reflect that they understand the relationship shown in the data.

F. *Exploring Consequences*
In exploring consequences, students are looking for the logical deductions and implications of a statement, hypothesis, or position. One assumes that if a position or hypothesis is true, then the logical implications of the position or hypothesis will also be true. This task opens new means for finding additional information to test ideas.

G. *Collecting Relevant Data*
An important skill in testing a hypothesis or position is the collection of relevant data. This operation measures the ability of the students to (1) discern whether specific data would be useful in studying a subject, (2) know where to locate relevant data, and (3) decide whether further information is needed for the analysis of the hypothesis or position.

H. *Analyzing Data*
In analyzing data students are expected to break down a set of information into its component parts and determine the relationship among the parts. In analyzing data students use critical thinking skills to discover the underlying assumptions, to distinguish fact from opinion, to determine the relevance of facts, to detect fallacies in arguments, and to discover the major ideas of a statement.

I. *Testing Ideas*
On the basis of a given case study, hypothesis, or statement, students would be asked to test an idea in the material. In this operation, they are using relevant data to test whether the hypothesis is supported, needs to be changed, or is unsupported by data. Students should be able to demonstrate their ability to discern whether data support, attack, or are irrelevant to the idea being tested and to suggest their own data to support or attack a given hypothesis.

J. *Making a Generalization*
A generalization is an expression of an explanatory, causal, correlative, or practical relationship between two or more factors or events. The generalization differs from a hypothesis only in the degree of tentativeness of the hypothesis. A generalization is the best possible solution based upon all available evidence. It is a statement of a relationship that is applicable to all similar cases at all times and places. A generalization is always subject to revision as new data are introduced.

K. *Applying a Generalization*
In this operation students are demonstrating their ability to derive meaning from a statement (generalization) and to use this information to predict what might happen if the generalization were applied to a novel situation or to explain events that have already taken place.

Depending on their purposes, program designers may consider collapsing some categories in the cognitive domain to make the problem-solving/inquiry process of exploring and testing ideas about the relations of individuals to their world more manageable and simpler for both students and their teachers. However, in our experience we find that the more specific the skill, the greater its chance of being implemented in the classroom as such. The broader the skill, the less opportunity to ascertain whether or not it is successfully used in class.

Evaluative

The *evaluative* domain is very closely related to the cognitive domain in so far as it deals with the justification of value positions as they relate to issues. To be able to identify an issue, to take a defensible position toward the issue, and to marshal evidence in support of a position are the main operations involved here. These operations are very significant in any new program since educators and school board members are beginning to recognize the conflicts in values that exist in the schools and in the larger society, and they see the need for schools to address themselves to the resolution of these conflicts. The behavioral definitions of the evaluative skills (Massialas, Sprague, & Hurst, 1975) are as follows:

L. *Identifying Issues*
An issue is much like a problem in that a conflict or discrepancy exists between positions and many solutions to the conflict are possible. The basis of the conflict is one of values, beliefs, and attitudes that lead to controversy over what should or ought to be done. As is true of a problem, there is no obvious right answer. In issues, the discrepancy is based on values, emotions, beliefs, and attitudes, rather than on knowledge and information. Like problems, issues can be at different levels—international, societal, personal, or all three. In this operation students are given data and are asked to find one or more value conflicts in the data.

M. *Taking a Defensible Position*
A position approximates the idea of a value judgment where one states a degree of worth, evaluates an action, or places a value on something or someone. Value judgments come from people's conception of how things ought to be. Value positions stem from value judgments made by the individual. The relationship between the two is close. Value positions refer to what should or should not be; value judgments place a worth on what is, was, or might be. In this operation students are asked to take a position about "what should be." At times students are asked to choose

among alternatives (Do you feel eighteen-year-olds should vote? Yes or no?). At other times, they are given open-ended questions. Students are asked to provide at least one defensible reason for their choice. If the reason given is supportive of the position and follows logically from the data, then students have demonstrated the skill of taking a defensible position by stating their position and defending their choice.

N. *Grounding a Position*
Grounds refer to the evidence upon which a value position or judgment is based. This evidence can include factual data, conclusions of authorities and experiments, positive and negative consequences, personal experience, the experiences of others, appeals to general knowledge, and other positions or value principles. Positions and judgments are not considered to be right or wrong, but supported or unsupported by valid evidence. In this operation, students are being measured on their ability to provide valid, reliable, and defensible evidence to support a position. Often this skill is measured by providing students with a position statement and several statements concerning the position. Students demonstrate their ability to identify evidence that supports, attacks, or is irrelevant to the position. In other cases, they are asked to supply their own supportive or nonsupportive evidence.

The two categories of skills that have been described are very important in the development of the cognitive potential of children, a potential that needs to be nurtured during the formative years. We intend to show that learning those skills can be accomplished by very young children, though naturally, at a different level of complexity. Young children, beginning with kindergarten, do develop ideas about the operation of the system in which they find themselves—the political, economic, ecological, and social spheres. They also develop certain predispositions and form certain views toward the system and its agents. The task of the elementary school is to enable children to form their ideas and judgments on rational grounds, utilizing the most up-to-date information sources that the disciplines provide and at the same time drawing upon relevant *personal* or *group experiences.*

Participatory

Participatory skills are those that enable individuals to take part in decisions that affect them. According to many eductional leaders, these skills are the most important ones that schools can provide; yet schools have failed to do so, assuming, erroneously, that these skills will be acquired by children incidentally. The case for the direct focus of schools on participation is made well by Forbes Bottomly (1975), former superintendent of schools in Seattle. He said:

> Is it possible . . . to make a whole school into a social laboratory where students learn concepts, develop cognitive skills and learn how to participate? Take one of these skills—negotiating.

> There is probably no skill more closely associated with success in our densely populated, highly pluralistic, bureaucratic, at times disagreeable democracy. It is an exercise essential to representative government. The U. S. Constitution provides for it along with a power balance which the drafters wisely foresaw as being necessary in forcing fruitful compromise. Banks, corporations, professions, teachers, agencies, and individuals negotiate as a dynamics of survival. Yet we do not help our young learn—in fact, we don't ordinarily tolerate it except, perhaps, in careful simulation.

A school program for the 1980's that fails to plan for direct participatory activity for the young is not meeting the need identified by Bottomly, Toffler, and others. If such activity is planned, however, children can participate in subject- and experience-related decisions at the individual, class, extra-class, or school levels. They can learn about their rights and about the obligations of members of a group to each other and have planned, built-in experiences for actual practice and decision-making. Thus, the concepts of power, leadership, and independence are not learned in the abstract, but in concrete situations in the class and in the school. Actual roles performed by all the school actors including students, teachers, administrators, and parents provide the focus; the school becomes a laboratory for learning participatory skills (along with cognitive and affective ones).

As we said before, participatory skills are those that are necessary for direct involvement in decisions. Synthesizing from the literature on participatory behavior, we have identified these skills as follows: observing, supporting, proposing, mobilizing, organizing, cost-benefit analysis, bargaining/negotiating, rule making, and voting. Some of the participatory skills are based on work by Gillespie and Patrick (1974) and papers by Massialas (1976).

Let's take a concept from the substantive dimension and see how it may translate into specific participatory behaviors. For example, in dealing with any issue from the perspective of politics one is bound to deal with the basis upon which power is distributed among members of a group, the sources and means of gaining and sustaining power, the emergence of leaders, etc. To bring the concept of the distribution of political power to the level of the student, we might build into the material activities that would cover the whole range of participation—from observation to voting. Let us assume we talk about decisions regarding grades and classroom assignments. How are these decisions made? How can those affected by them participate?

Here are some operational definitions in the domain of participation:

O. *Observing* is the skill of reproducing (reporting) as accurately as possible an event or a situation in the school or in the com-

munity. Can one make a statement about what one sees regarding the process by which grades are given and assignments are made? Is this statement confirmed by others?

P. *Supporting* means to actively assist in carrying out the goals of an organization. Means of support range from offering a sympathetic ear to individuals (students, teachers, parents, etc.) who express certain positions regarding the way grades are assigned, to actually siding with or being very vocal in favor of a position presented by other members of the group. In the latter situation one would assume the role of an advocate.

Q. *Proposing* involves the act of originating a point of view or policy and expressing it in understandable and persuasive terms. One may propose, for example, that grades be assigned only after group deliberation and reflection and that explicit criteria, with which everyone in the group agrees, be developed for grading. Others might consider grading to be within the purview of the teacher, a prerogative established by long tradition, and feel that the teacher should continue to "give" grades.

R. *Mobilizing* entails the skill of getting others to support one's own position. If one wants to change the process by which grades are assigned, one would need to marshal some form of support—psychological or material—from other students, teachers, administration, parents, etc. Techniques of public mobilization include emotional appeals, coercion, persuasion, etc. While the whole range of mobilizing skills do not need to be practiced in the classroom, we should never lose track of Dewey's idea that the best learning is "learning by doing." (This idea is the strongest argument for participation by students on a systematic, not incidental, basis.)

S. *Organizing* is the skill of systematically planning and scheduling individual or group activities to meet certain goals. The organizer understands the social psychology of group members and sees to it that maximum efficiency is attained by assigning people to appropriate tasks. In our example a student, after establishing the goals, may organize a group to make an appearance before the school administrators or a parental advisory group to present the views of the membership regarding the process of assigning grades.

T. *Cost-benefit* analysis means the careful review of a situation to estimate the loss or gain that would occur should a certain activity be carried out. In its simplest form the skill relates to the ability to figure out what is to be gained or lost from a certain individual or group action. Would the school administrators be negatively disposed toward the student petition on the grading system if the whole class walked into the principal's office, rather than if a small group of representatives scheduled a meeting to discuss the proposal? (Here the evidence from similar situations on state or national levels would be most appropriate and would provide to students "multilevel understanding.")

U. *Bargaining* is the skill of influencing others to accept a certain decision. Bargaining or negotiating involves a range of techniques such as trading, persuading, or confronting. In trading, one gives up a demand in return for something that the adversary gives up. In persuading, one convinces the adversary to see things one's own way. In confronting, one might use the threat of demonstration, walk out, or other direct or indirect sanctions against the opposing person or group. (Again, relating national- or state-level practice to one's own situation might be extremely useful here and might promote multilevel understanding.)

V. *Rule making* (or legislating) is the skill of expressing, preferably in writing, a decision that is considered binding by all people affected by it. The decision, for example, to begin assigning grades on the basis of grading criteria agreeable to all students should be clearly stated and should be acceptable to all (including teachers and parents).

W. *Voting* is the act of explicitly casting a ballot for a course of action, a candidate, or a policy. In a democratic society all public acts, to be binding, must be voted upon either by the people or by their elected representatives.

Normative

Not to imply that the school seeks to train little Machiavellis skilled only in getting their way through trading and negotiating, we should move quickly into the *normative* category in our matrix. This category, as the table of specifications indicates, includes the following: empathizing, being fair, promoting equality, and applying justice (other norms can be added here). The category involves the application of ethical standards to participatory acts. The standards derive from the democratic ethos of American society, but each participant is free to define for himself or herself the specific ethical criteria that are appropriate.

X. *Empathizing* is the ability of an individual to get a sense of other individuals' feelings and emotions. It is the ability of placing oneself in another's shoes during interaction. It is the process of identifying oneself with another person's problems.

Y. *Being fair* is the ability of an individual interacting with others to consider and abide by the "rules of the game," whether they are stated explicitly or are implied in the situation. In the American democratic society one of the rules is that all persons have a right to voice their opinions. The amendments to the Constitution provide explicit rules based on what its writers thought to be fair.

Z. *Promoting equality* is the ability to apply the principle that "all men are created equal." If a person promotes equality, then he/she will have to reject any notions that the other person is inferior.

AA. *Applying justice* is the ability (as a minimum) to withhold any acts that deprive another person of his/her basic rights. In the American context, basic rights of individuals are included in

the Declaration of Independence, the Constitution, and the federal, state, and local laws.

Affective

The *affective domain* deals with attitude formation. Attitudes are one's own general orientations toward one's environment. In our system we have included five basic orientations, the definitions of which are given below. These orientations may develop along with the other skills and behaviors that are included in the matrix (Massialas, Sprague, & Hurst, 1975). We believe, however, that the attitudes of the students will change in a positive way—they will be more efficacious—as a result of learning cognitive skills and having the opportunity to participate in decisions affecting them.

BB. *Being Objective*

Objectivity refers to the process of approaching a problem, issue or situation without having a closed or biased position concerning the solution. Biases can be identified and minimized in the scientific and rational analysis of information, problems, and issues. In general, objectivity refers to an open mind and a willingness to analyze and accept or reject alternatives rationally without predetermined conclusions. It also includes the process of identifying accurate sources of information. The following criteria may be used to measure the objectivity and reliability of a source.

1. The observer's familiarity with the event being described.
2. The extent to which the observer had a vested interest in the event.
3. The extent to which the observation was direct or indirect.
4. The amount of time that has passed between the observation and the writing of the account.
5. The extent to which the author (or observer) of the source was limited by cultural, ethnic, religious, social, or other biases.
6. The extent to which the author was influenced by a special interest, such as financial reward or personal hatred.
7. The extent to which the ideas and information are consistent or non-contradictory.
8. The extent to which other documents and research support the content of the source in question.

CC. *Showing Interest*

Showing interest refers to one's expressed attitude toward one's own environment (social, political, economic) in the sense that one seeks satisfaction in attending to such matters. "I turn on the TV every time the President makes a speech to the American people because I want to know how he feels about our support to Israel." This is a statement that generally expresses an attitude of political interest. On the other hand, a person who does not seek but also avoids political stimuli would demonstrate political apathy. Students' interest in an

activity or a topic may be observed in some of the following ways: listening, being excited about something, coming up after class to talk more about the topic.

DD. *Showing Trust*

Trust refers to the feeling of confidence that one develops toward the socio-political world including the performance of social and political actors and the processes used in decision-making. For example, a person demonstrating political trust would view the governor as caring about the personal lives of the citizens. The opposite of trust is cynicism—often expressed as, "There is no way to beat City Hall," or "All people connected with politics are crooks." If the child's sense of trust toward people involved in politics is at the level expressed in the last statement then that child's potential for participation in the political process is preempted. He or she will never want to associate with politics (it is dirty!) and hence an entire area of human productive and satisfying endeavor will be bypassed. In view of this it is the school's responsibility to foster an attitude of trust based on real presentation of political life at various levels—the individual, the group, the national, and the international.

EE. *Being Efficacious*

Being efficacious refers to one's understanding of how the system (economic, social, ecological, political) operates and the belief that one has the ability to change the system through one's own efforts or through group efforts. The statement, "I believe our team will win the championship because we know how to play the game and we understand the strengths and weaknesses of our opponents," may convey a person's sense of efficacy in athletic competition.

FF. *Showing Sense of Social Integration*

Showing sense of social integration refers to a person's feeling that he or she is a member of a group, sharing the group's goals and aspirations. For example, persons who have a high sense of social integration would feel that their proposed new grading system represents the community of students, and vice versa, that the body of students represents their own views and interests.

Parenthetically we may point out that being efficacious is probably the most important general attitudinal framework we have. It is identified as being the *most significant* thing that the school can and should do to provide each individual with the power to cope. Toffler (1974, p. 76) talks about the significance of the learner's participation in decisions that comes as a result of the image one holds of himself or herself (i.e., the self concept of each individual). Wendell Bell (Toffler, 1974, p. 104) talks about education's role in providing children a sense of internal control. Michael McDanield (Toffler, 1974, p. 104) refers to efficacy when he summarizes the answers of educators regarding needed learning materials for the year 2001:

Materials that will help maturing individuals *not to feel powerless or impotent.*

Materials that will help maturing individuals *see the means of affecting the direction of change.*

Our proposed program is designed to develop materials that will make individuals, both students and teachers, increase their sense of efficacy, i.e., develop the feeling that they are competent to influence decisions affecting them in the political, social, economic, and ecological arenas.

Program Design

We said earlier that one of the ways schools can become relevant is to identify the things that students do and capitalize on them. We know that students in schools attend classes, eat lunch, are referred to the principal and the counselor, participate in "extracurricular" activities, etc. In each instance decisions are made that determine what the students will do. Can we use these decisions and the conditions and situations surrounding them for learning purposes? If we can, then we will be making school work relevant because it will deal with the real world of the children—their problems and concerns. Thus school, in the Dewey tradition, is not preparation for life but life itself.

We propose that we design about fifteen modules that would provide the entry points into decision-makng situations in the school. Each module would be based on a 30-minute television tape or 16mm film and would include a teacher's manual and a series of learning springboards for children. Each module would focus on a school decision that affects children. The instructional goals for each module would be:

a. To understand how decisions are made.

b. To develop appropriate skills—cognitive, evaluative, participatory, normative, affective—to enable children to participate in these decisions.

c. To provide actual participatory opportunities to apply the skills learned.

Modules can be constructed on decision-making topics at different levels—class, school, extraclass, etc. Decision objects would include: grades, rewards and punishments, seating arrangements, passes, homework and assignments, evaluation of learning, participation in discussion, field trips, student government, textbook selection, assignment to extraclass activities, lockers, administrative procedures (front office), etc. Each module would seek to involve students and other school actors (teachers, administrators, paraprofessionals, etc.) in learning activities that aim at answering the following questions:

What is the valued object? (e.g., grades)

Who make(s) the decision about the valued object?

At what level(s)?

What are the decision-making processes?

Are these processes clear?

Whom does the decision affect?

Is the decision acceptable to those affected by it?

Is the decision fair?

Can the decision be changed? If so, how?

These questions can be made more specific and can relate directly to each decision object under study. The questions in all of the modules seek to provide the setting for implementing all the skills we have included in our matrix.

A module on decisions regarding class assignments could begin by a case study of a teacher (Mrs. Smith) making all the decisions on what is to be the topic of study and what is to be read. This can be presented beautifully by a television program followed by questions such as: In this class who makes the decisions about topics of study and assignments? Who do you think is affected by the decisions? Explain. Do you think that those affected by the decisions accept them? Why or why not? How would you feel if you were a member of this class? If you consider unfair the way decisions on assignments are made, how would you change it? What would you do? What could you do?

After the opening exercise above, students might be asked to relate Mrs. Smith's class to their own and to state to what extent the decision-making mechanisms are similar. This discussion would bring the application of the skills to bear directly on their own situation. It would also get the teacher to think about opportunities for students to participate in decisions. Materials dealing with decisions at the school, community, state, or national levels could follow. A set of questions similar to those about the case study could be asked of students so that they begin to see that decision-making at all levels has certain characteristics and processes and that these can be learned and generalized. Comparing different decision-making settings fosters multilevel understanding and enhances comprehension of the phenomenon under investigation.

The final exercise should deal directly with decision-making in the student's class and the extent to which a change in the class operation is needed and is feasible. This exercise should have built-in situations for participation that include organizing the group for action and negotiating new rules and procedures. As part of the activity the students should be given evaluation sheets that would record how successful their efforts at participation were.

Summary

This paper started with the assumption that the world is becoming increasingly complex and that individuals, to survive, need to learn the critical skills in decision-making. We said that young children are capable of learning these skills, especially in contexts where real decisions are made. Real decisions are constantly made in school; the task of educators is to identify these decisions and provide meaningful programs for student participation.

In this paper we proposed the development of a series of modules and TV tapes/films that would enable the children to understand how decisions are made—in class, in the principal's office, in the school cafeteria, in band, etc. Furthermore, each module would provide "entry points" into the decisions. Thus students at the fifth- and sixth-grade levels would not only understand how the system of which they are a part operates but would acquire skills that enable them to change the system. As a result of cognitive understanding and participation, students would become efficacious—confident that they can influence decisions that affect them.

Reference List

Bloom, B., Hastings, J. T., & Madaus, G. F. *Handbook on formative and summative evaluation of student learning.* New York: McGraw-Hill, 1971.

Bottomly, F. Political participation in school life. *The Georgia Social Science Journal,* 1975, 7(1), 13-19.

Gillespie, J. A., & Patrick, J. J. *Comparing political experience.* Washington, D.C.: American Political Science Association, 1974.

Hess, R. D., & Torney, J. V. *The development of political attitudes in children.* Chicago: Aldine, 1967.

Massialas, B. G. Papers in *Theoretical framework for skills for democratic participation* (ESEA Title IV-C Project, Leon County School District, Tallahassee, Florida, 1976. These are mimeographed papers.)

Massialas, B. G., Sprague, N., & Hurst, J. *Social issues through inquiry: Coping in an age of crises.* Englewood Cliffs, New Jersey: Prentice-Hall, 1975.

Toffler, A. (Ed.). *Learning for tomorrow.* New York: Vintage Books, 1974.

Additional copies of this publication are available from the Agency for Instructional Television, Box A, Bloomington, Indiana 47401. For each copy requested, enclose fifty cents to cover the costs of postage and handling.

Publication of this paper was financed by funds from Exxon Corporation.